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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,510

05/14/2007

Ichiro Kawabuchi

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BENESCH, FRIEDLANDER, COPLAN & ARONOFF LLP
ATTN: IP DEPARTMENT DOCKET CLERK
200 PUBLIC SQUARE
SUITE 2300
CLEVELAND, OH 44114-2378

EXAMINER

RO, BENTSU

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

07/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,510	Applicant(s) KAWABUCHI ET AL.	
	Examiner BENTSU RO	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12 is/are rejected.
- 7) ☒ Claim(s) 5-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/10/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Abstract

1. The abstract filed on 5/14/2007 is objected to because it exceeds 150 words. A new abstract typed in a separate page in accordance with the requirement set forth in MPEP 608.01(b) is required.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 12 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kameda et al USPN 7,059,645.

The claims read onto Kameda et al teaching as follows:

The claims:	Kameda et al teaching:
<p>1. A robot hand including a plurality of finger mechanisms corresponding to a plurality of human fingers, respectively,</p> <p>each of said finger mechanisms being constituted by a plurality of phalange sections</p> <p>including a distal phalange section</p> <p>and a middle phalange section adjacent to the distal phalange section,</p> <p>said robot hand comprising:</p> <p>a fingertip rotating mechanism that causes the distal phalange section to rotate relative to the middle phalange section in two directions</p> <p>comprising an inward direction and an outward direction within a predetermined angular range, from a state where the distal phalange section is arranged in a straight line with the middle phalange section.</p>	<p>Fig. 1 clearly shows a plurality of finger units 5, 11, 12; these finger units are finger mechanisms corresponding to a plurality of human fingers;</p> <p>Fig. 2 shows finger unit includes fingertip portion 57 and finger base portion 55; the fingertip portion and the finger base portion corresponding to a plurality of phalange sections;</p> <p>the fingertip portion 57 (Fig. 2) is a distal phalange section;</p> <p>the finger base portion 55 (Fig. 2) is a middle phalange section;</p> <p>Fig. 2 shows two sections 57 and 55, however, column 7, lines 35-36 clearly states that more than two sections is also possible;</p> <p>Fig. 7 shows a fingertip 109 and a rotating mechanism, the rotating mechanism includes a joint 108, a rotating shaft 123, a second actuator 121, bevel gears 124, 128, etc.;</p> <p>Figs. 1, 2, 3, 4A and 6 all show inward and outward rotation (the phantom lines).</p>
<p>2. The robot hand according to claim 1, further comprising:</p>	

<p>a rotation driving mechanism that causes a first finger mechanism corresponding to a human thumb among said finger mechanisms to rotate by a predetermined angle about a center line extending in a direction where the phalange sections constituting said first finger mechanism are arranged so that said first finger mechanism fully facing the other finger mechanism.</p>	<p>Fig. 1 shows turning actuators 6, 7; Fig. 3 shows rotating shaft 61; these turn and rotation shaft/actuators allow the fingers to rotate face to face.</p>
<p>3. The robot hand according to claim 1, wherein the fingertip rotating mechanism includes at a connecting portion between the distal phalange section and the middle phalange section</p> <p>a single degree of freedom joint for allowing bending or stretching and also includes a driving mechanism that causes the joint to make a rotating motion within the predetermined angular range; and the joint and the driving mechanism are configured so that the distal phalange section can be rotated relative to the middle phalange section in the two directions, namely, the inward direction and the outward direction within the predetermined angular range from the state where the distal phalange section is arranged in a straight line with the middle phalange section.</p>	<p>Fig. 7 shows a connecting member 116;</p> <p>Fig. 7 shows a joint 108, bevel gear 124, 128, etc.</p>
<p>4. The robot hand according to claim 3, wherein the driving mechanism comprises a motor for driving the joint and a speed reducer, the motor for driving the joint being included in the middle phalange section and generating a driving force for rotating the joint, the speed reducer</p>	<p>Fig. 7 shows a second actuator 121 which comprises a servo motor;</p> <p>the bevel gears 124, 128 are speed reducers.</p>

reducing a speed of the motor and transmitting the reduced speed to the joint.	
12.	Claim 12 is rejected because all the elements are same as the preceding rejected claims 1-4.

Allowable Subject Matter

4. Claims 5-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Miscellaneous

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENTSU RO whose telephone number is (571)272-2072. The examiner can normally be reached on 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENTSU RO/
Primary Examiner, Art Unit 2837